

Appl. No. 10/734,381
Atty. Docket No. 7858MR
Amdt. Dated September 18, 2007
Reply to Office Action Dated May 22, 2007
Customer Number 27752

REMARKS

Claim Status

Claim 1 is amended to specifically define the present claimed phosphonate-containing copolymers or cotelomers in terms of their molecular weight and the monomers from which they are prepared. Support for this amendment may be found in the Specification at Pages 7-8 in the paragraphs describing the preparation of the polymers suitable for use in the present claimed method.

It is believed these changes do not involve any introduction of new matter. Consequently, entry of these changes is believed to be in order and is respectfully requested.

Claims 1 to 6 and 10 are under consideration. Claims 7 to 9 which are drawn to nonelected species are withdrawn at this time.

Claims Rejection Under 35 U.S.C. §102(b)

Claims 1-6 and 10 have been rejected under 35 USC §102(b) as being anticipated by Degenhardt et al. (U.S. 4,877,603). It is contended that the diphosphonate polymers disclosed by Degenhardt would inherently possess all the characteristics of the present claimed polymers.

Applicants respectfully traverse the Examiner's rejection of the claims under 35 §102(b) and submit that the claimed method to provide enhanced fluoride incorporation into and remineralization of the subject's teeth is novel from Degenhardt.

First, the polymers included in the present claims are distinct from the geminal diphosphonate-containing polymers of Degenhardt which are prepared by reacting phosphorous acid or a precursor thereof with a pre-prepared carboxyl polymer such as polyacrylate according to the method described in US 4,207,405. The geminal diphosphonate compounds disclosed by Degenhardt are not prepared by polymerizing the present vinylphosphonate monomers with another monomer such as acrylate. The resulting polymers prepared according to the Degenhardt reaction scheme are structurally different from the present claimed polymers.

Secondly, the present claimed benefit of increasing mineralization is not disclosed by Degenhardt and in fact, would be totally unexpected based on the teaching of anticalculus benefits from the geminal diphosphonate group containing polymers. Anticalculus benefits are provided by agents that inhibit mineral deposition and crystal growth and/or chelate calcium that together with phosphate and fluoride would form the hydroxyapatite mineral deposit. By

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contrast the present method involving the claimed phosphonate-containing polymers increase increase fluoride and total mineral content of teeth and resistance to a secondary acid challenge as demonstrated in Example 1.

It is therefore respectfully submitted that the present invention as now claimed is novel over Degenhardt and the rejection of the claims under 35 §102(b) should be withdrawn.

Double Patenting Rejection

Claims 1-6 and 10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-4 of commonly-assigned copending Application No. 10/737,425 in view of Gaffar et al. (US 5,032,386).

As previously indicated, Applicants will file a terminal disclaimer upon indication of allowance, which should overcome the double patenting rejection.

Rejoining of Nonelected Claims

Claims 7 to 9 were withdrawn from consideration earlier in response to an election of species requirement. Applicants respectfully request rejoining of Claims 7 to 9, dependent from Claim 5 and ultimately from Claim 1, which are believed to be allowable.

CONCLUSION

Applicants have made an earnest effort to place their application in proper form and to distinguish the invention as now claimed from the applied reference. In view of the foregoing, reconsideration of the application, entry of the amendments presented, withdrawal of the rejection under 35 U.S.C. §102(b), rejoining of the withdrawn claims, and allowance of all claims are respectfully requested.

The Examiner is respectfully invited to telephone the undersigned representative if it is believed an interview might be useful to advance prosecution of this case.

Respectfully submitted,

THE PROCTER & GAMBLE COMPANY

By Emelyn L. Hiland

Emelyn L. Hiland
Agent for Applicants
Registration No. 41,501
(513) 622-3236

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